UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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ART UNIT	PAPER NUMBER
2111	3

DATE MAILED: 03/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/966,271	SPENCER, ANDREW M.
	Examiner	Art Unit
	Khanh Dang	2111

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on _____.

2a) ☐ This action is **FINAL.**   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-16* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-18* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *2*.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

U.S. Patent and Trademark Office

PTOL-326 (Rev. 1-04)   **Office Action Summary**   Part of Paper No./Mail Date 3

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities:

On page 9, lines 21-22, the memory card and memory card controller are both

designated by the same reference number (120).

On page 13, lines 6-8, and 24, "processor 210" should be changed to –

processor 220 --.

Appropriate correction is required.

The specification is objected to as failing to provide proper antecedent basis for

the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction

of the following is required: "a memory [of the memory card controller] that stores a file

allocation and the file system structures" (claim 1).

Claim Rejections - 35 USC § 112

Claims 1-4, and 13 are rejected under 35 U.S.C. 112, second paragraph, as

being indefinite for failing to particularly point out and distinctly claim the subject matter

which applicant regards as the invention.

Claims 1-4 are directed to an apparatus. However, the essential structural

cooperative relationship(s) between the "memory" and "the processor" have been

omitted, such omission amounting to a gap between the necessary structural

connections. It is clear from the originally filed specification that "the memory" and the

"processor" of the "memory card controller" function simultaneously, are directly

functionally related, directly intercooperate, and/or serve independent purposes. MPEP

2172.01 clearly states that "a claim which fails to interrelate (emphasis added)

essential elements of the invention as defined by applicant(s) in the specification may

be rejected under 35 U.S.C. 112, second paragraph, for failure to point out and

distinctly claim the invention. See *In re Venezia,* 530 F.2d 956, 189 USPQ 149 (CCPA

1976); *In re Collier,* 397 F.2d 1003, 158 USPQ 266 (CCPA 1968).

In claim 3, the subject matter of claim 3 cannot be determined.

With regard to claim 13, the phrase, "the one of a particular one" is unclear and

cannot be ascertained.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 5-7, 9-11, and 13-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Miyauchi (5,841,699).

At the outset, it is noted similar claims will be grouped together to avoid repetition.

As broadly drafted, these claims do not define any structure/step that differs from Miyauchi.

With regard to claims 1 and 3, Miyauchi discloses a memory card controller, comprising: a memory (RAM for storing Address Conversion Table 5) that stores a file allocation table and file system structures for a memory card to be controlled by the memory card controller (in Miyauchi, data management (including FAT and directory entry table or file system structures such as root directory) stored in a Address Conversion Table 5 of the flash memory is not controlled by the host as in the case of prior art (see col. 1, lines 13-25), but by an Internal Control CPU 33 (see col. 2, lines 16-20)) ; and a processor (Internal Control CPU 33) that manages the file allocation table and file system structures based on requests made by a host device (10) with respect to information to be retrieved from the memory card (30) or with respect to information to be stored on the memory card.

With regard to claim 2, in Miyauchi, the memory is a random access memory (SRAM or DRAM) or a storage memory (7) of the memory card (as in the prior art disclosed by Miyauchi, col. 1, lines 13-25).

With regard to claim 5, Miyauchi discloses a method of determining whether a file write request output from a host device (10) for writing a file to a memory card (30) can

be accommodated, comprising: obtaining, by a memory card controller (including Internal Control CPU 33 and RAM for storing Address Conversion Table 5) that provides a communications interface (interface circuit 2) between the memory card (30) and the host device (10), a file allocation table (FAT) and file system structures stored on the memory card (in Miyauchi, data management (including FAT and directory entry table or file system structures such as root directory) stored in a Address Conversion Table 5 of the flash memory is not controlled by the host as in the case of prior art (see col. 1, lines 13-25), but by an Internal Control CPU 33 (see col. 2, lines 16-20)); storing the FAT and file system structures at the memory card controller (including Internal Control CPU 33 and RAM for storing Address Conversion Table 5); determining, by the memory card controller (including Internal Control CPU 33 and RAM for storing Address Conversion Table 5) based on information obtained from the FAT, whether the memory card (30) has sufficient available storage space (available physical addresses) to fulfill the file write request made by the host device (10); and informing the host device (10) as to whether or not the file write request can be fulfilled. Note that the host (10) can initialize the memory card (30). As a matter of fact, any conventional system including data transfer from and to the host involving flash memory, a host can perform READ, WRITE, COPY, DELETE, or MOVE.

With regard to claims 6 and 10, the storing step is performed by storing the FAT and file system structures onto a random access memory (SRAM or DRAM) of the memory card controller (including Internal Control CPU 33 and RAM for storing Address Conversion Table 5).

With regard to claims 7 and 11, the random access memory is a random access memory (SRAM or DRAM) or a storage memory of the memory card (as in the prior art disclosed by Miyauchi, col. 1, lines 13-25).

With regard to claim 9, Miyauchi discloses a method of determining whether a file read request output from a host device (10) for reading a file from a memory card can be accommodated, comprising: obtaining, by the host device (10), information regarding names of files stored on the memory card (30); outputting, by the host device (10), the memory read request to read a particular one of the files stored on the memory card (30); obtaining, by a memory card controller (including Internal Control CPU 33 and RAM for storing Address Conversion Table 5) that provides a communications interface (interface circuit 2) between the memory card (30) and the host device (10), a file allocation table (FAT) and file system structures (in Miyauchi, data management (including FAT and directory entry table or file system structures such as root directory) stored in a Address Conversion Table 5 of the flash memory is not controlled by the host as in the case of prior art (see col. 1, lines 13-25), but by an Internal Control CPU 33 (see col. 2, lines 16-20)) stored on the memory card (30) to determine storage locations (physical addresses) on the memory card (30) whereby the particular one of the files is stored; storing the FAT and file system structures on the memory card controller (including Internal Control CPU 33 and RAM for storing Address Conversion Table 5); and providing the particular one of the files to the host device (10) from the memory card (30) to the host device (10), under control of the memory card controller (including Internal Control CPU 33 and RAM for storing Address Conversion Table 5).

Note that the host (10) can both read and write to the memory card (30). As a matter of

fact, any conventional system including data transfer from and to the host involving flash

memory, a host can perform INITIALIZE, READ, WRITE, COPY, DELETE, or MOVE.

With regard to claim 13, the providing step comprises the following substeps:

informing the host device (10) as to all storage locations (physical addresses) on the

memory card (30) that the one of the particular one of the files is stored; and providing

commands, by the host device (10) to the memory card controller (including Internal

Control CPU 33 and RAM for storing Address Conversion Table 5), to obtain contiguous

storage locations (physical addresses) of the memory card (30); and obtaining the

contiguous storage locations from the memory card (30) to the host device (10) under

control of the memory card controller. Note that In Miyauchi, the Internal Control CPU

33 controls a Address Conversion Table that stores both the logical addresses of the

host (10) and physical addresses or storage locations of the memory card, and inform

the host (10) about the available physical addresses or storage locations of the memory

card.

With regard to claims 14-16, see explanation regarding claims 5-13 above. Note

that the host (10) can both read and write to the memory card (30). Note also that the

data management including FAT is temporarily stored in the Address Conversion Table

(5) and changed or renewed after each READ, WRITE, COPY, DELETE, or MOVE from

the host (10). As a matter of fact, any conventional system including data transfer from

and to the host involving flash memory, a host can perform INITIALIZE, READ, WRITE,

COPY, DELETE, or MOVE.

Claims 1-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Fujio (cited by the Applicant).

At the outset, it is noted similar claims will be grouped together to avoid repetition.

As broadly drafted, these claims do not define any structure/step that differs from Fujio (cited by the Applicant).

With regard to claims 1 and 3, Fujio discloses a memory card controller, comprising: a memory (Management Information RAM 32) that stores a file allocation table and file system structures (data management table including FAT and directory such as root directory, for example) and for a memory card (20) to be controlled by the memory card controller; and a processor (card controller 31) that manages the file allocation table and file system structures based on requests made by a host device with respect to information to be retrieved from the memory card or with respect to information to be stored on the memory card (20).

With regard to claim 2, the memory is a random access memory (RAM 32) or a storage memory of the memory card.

With regard to claim 4, the host device of Fujio is a portable device using flash memory card. Thus, it is clear that such portable device includes one of a personal digital assistant, a digital camera, and a cellular phone.

With regard to claim 5, Fujio discloses a method of determining whether a file write request output from a host device (21) for writing a file to a memory card (20) can

be accommodated, comprising: obtaining, by a memory card controller (including controller 31 and RAM 32) that provides a communications interface between the memory card (20) and the host device (21), a file allocation table (FAT) and file system structures stored on the memory card (in Management Information Table); storing the FAT and file system structures at the memory card controller (including controller 31 and RAM 32); determining, by the memory card controller (including controller 31 and RAM 32) based on information obtained from the FAT, whether the memory card has sufficient available storage space (or storage area) to fulfill the file write request made by the host device; and informing the host device (21) as to whether or not the file write request can be fulfilled. Note that the host (21) can initialize the memory card (20). As a matter of fact, in any conventional system including data transfer from and to the host involving flash memory, a host can perform INITIALIZE, READ, WRITE, COPY, DELETE, or MOVE.

With regard to claim 6, the storing step is performed by storing the FAT and file system structures onto a random access memory (RAM 32) of the memory card controller (including Controller 31 and RAM 32).

With regard to claim 7, the random access memory is a random access memory (RAM 32) or a storage memory of the memory card.

With regard to claim 8, the host device of Fujio is a portable device using flash memory card. Thus, it is clear that such portable device includes one of a personal digital assistant, a digital camera, and a cellular phone.

With regard to claim 9, Fujio discloses a method of determining whether a file

read request output from a host device (21) for reading a file from a memory card (20)

can be accommodated, comprising: obtaining, by the host device (20), information

regarding names of files stored on the memory card (20); outputting, by the host device

(20), the memory read request to read a particular one of the files stored on the memory

card (20); obtaining, by a memory card controller (including controller 31 and RAM 32)

that provides a communications interface between the memory card (20) and the host

device (21), a file allocation table (FAT) and file system structures (in Management

Information Table) stored on the memory card (20) to determine storage locations on

the memory card (20) whereby the particular one of the files is stored; storing the FAT

and file system structures on the memory card controller (including controller 31 and

RAM 32); and providing the particular one of the files to the host device (21) from the

memory card (20) to the host device (21), under control of the memory card controller

(including the controller 31 and RAM 32). Note that the host (21) can both read and

write to the memory card (20). As a matter of fact, any conventional system including

data transfer from and to the host involving flash memory, a host can perform

INITIALIZE, READ, WRITE, COPY, DELETE, or MOVE.

With regard to claim 10, the storing step is performed by storing the FAT and file

system structures onto a random access memory (RAM 320 of the memory card

controller (including Controller 31 and RAM 32).

With regard to claim 11, the random access memory is a random access memory

or (RAM 32) a storage memory of the memory card.

With regard to claim 12, the host device of Fujio is a portable device using flash

memory card. Thus, it is clear that such portable device includes one of a personal

digital assistant, a digital camera, and a cellular phone.

With regard to claim 13, in Fujio, the providing step comprises the following

substeps: informing the host device (21) as to all storage locations on the memory card

(20) that the one of the particular one of the files is stored; and providing commands, by

the host device (21) to the memory card controller (including Controller 31 and RAM

32), to obtain contiguous storage locations of the memory card; and obtaining the

contiguous storage locations from the memory card (20) to the host device (21) under

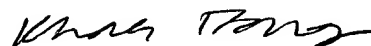control of the memory card controller (including Controller 31 and RAM 32).

With regard to claims 14-16, see explanation regarding to claims 5-13 above.

Note that the host (21) can both read and write to the memory card (20). Note also that

the data management including FAT is stored in the Management Information Table

RAM 32 and changed or renewed after each READ, WRITE, COPY, DELETE, or

MOVE from the host (10). As a matter of fact, any conventional system including data

transfer from and to the host involving flash memory, a host can perform READ,

WRITE, COPY, DELETE, or MOVE.

U.S. Patent Nos. 6,704,852 to Lai et al. and 5,846,714 to Miyauchi are cited as

relevant art.

Any inquiry concerning this communication should be directed to Khanh Dang at telephone number 703-308-0211.

Khanh Dang
Primary Examiner